

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 2002023-WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DK 03/00720	International filing date (day/month/year) 23.10.2003	Priority date (day/month/year) 23.10.2002
International Patent Classification (IPC) or both national classification and IPC A61M39/10		
Applicant COOPLAST A/S et Al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.
 - This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:
 - I Basis of the opinion
 - II Priority
 - III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV Lack of unity of invention
 - V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI Certain documents cited
 - VII Certain defects in the international application
 - VIII Certain observations on the international application

Date of submission of the demand 16.04.2004	Date of completion of this report 31.01.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Schönleben, J Telephone No. +31 70 340-2436



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/DK 03/00720

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-12 as originally filed

Claims, Numbers

1-9 filed with telefax on 24.01.2004

Drawings, Sheets

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

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5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-9
	No: Claims	
Inventive step (IS)	Yes: Claims	1-9
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

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Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: US-A-3 747 632 (KOK A ET AL) 24 July 1973 (1973-07-24)
D2: US 2002/115984 A1 (GUALA GIANNI) 22 August 2002 (2002-08-22)

Document D1 discloses (see col. 2, line 35 to col. 3, line 63, and figures 1, 2; the references in parentheses applying to this document) a coupling device comprising a first connector part 20 and a second connector part 21, each connector part comprising at least one connecting portion 22, 27 for engagement with at least one corresponding connection portion of the other connector part, a disengagement means 30 being provided for at least assisting in disengaging the engagement between said connecting portions 22, 27 and each connector part 20, 21 (see col. 4, lines 61 to 63), the first connector part 20 comprising a member 34 having a projection for engagement with the disengagement means 30, the device comprising at least two connecting portions (see fig. 1, 2), the disengagement means 30 being connected with the first connector part 20 and comprising engagement means 31 for engagement with corresponding engagement means 33 on the second connector part 21, the second connector part 21 comprising a disk (the surface of the coupling plate 21) including a through-going hole 27 in connection with each corresponding connecting portion 22, the engagement means 31 of the disengagement means 30 comprising internal threads 31, 32 and the engagement means of the second connector part 21 comprising external threads 33, and wherein the holes 27 in the disk of the second connector part 21 are arranged with small spacing (see fig. 1: the male connecting portions 22 extending from the surface of the connector part 20 obviously are received in holes 27 arranged in the surface of the connector part 21 with the same distance between them as the distance between the connecting portions 22, see also fig. 2), and in which the external threads 33 (of the second connector part 21) comprise at least one recess (see fig. 1 the space between the threads 33).

The subject-matter of claim 1 differs from this known state of the art in that the engagement means of said second connector part is provided on the end surface of the disk facing the first connector part and in that the member of the first connector part for engagement with the disengagement means is a resilient member.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

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The problem to be solved by the present invention may be regarded as to provide a coupling device which is as compact as possible.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

According to D1 the engagement means of the second connector part is provided on the peripheral side edge of the connector part (see fig. 1) whereas according to the present invention the second connector part is provided with engagement means on that end surface of the disk that faces the first connector part (see fig. 4). Since the end surface area of the disk is already exploited by through-going holes it is not obvious to move the engagement means from the edge of the second connector part to the end surface of the disk insofar as the through-going holes leave less free space on the surface of the disk. Additionally, there is also nothing suggested to provide a resilient member for engagement with the disengagement means so that the disengagement means can be slipped over this resilient member.

Document D2 also discloses a coupling device having disengagement means connected with a first connector part whereby the disengagement means comprises engagement means working together with corresponding engagement means on the second connector part. But as in D1, the engagement means of the second connector part is provided on the peripheral side edge of the connector part, so that also D2 does not allow a compact configuration of the coupling device.

Claims 2 to 8 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Claim 9 is related to a method of disengaging the engagement between a first and a second connector part of a coupling device according to any one of claims 1 to 8. As such, claim 8 also meet the requirements of the PCT with respect to novelty and inventive step.

Remarks:

Claim 4 does not meet the requirements of Article 6 PCT. Claim 4, which is related to any of the preceding claims, just repeats the features of claims 2 and 3.

Independent claims 1 and 9 are not in the two-part form in accordance with Rule 6.3(b)

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PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

The expression "the holes in the disk are arranged with *small* spacing" used at the end of claim 1 is vague and unclear since the term "small" is just a relative term not specifying a clear definition. A clear definition is given for example on page 9, lines 13 to 15.

Claims

1. A coupling device (9) comprising a first connector part (10) and a second connector part (11), each connector part (11, 10) comprising at least one connecting portion (16a, 16b, 13, 14) for engagement with at least one corresponding connecting portion (16a, 16b, 13, 14) of the other connector part (11, 10), a disengagement means (12) being provided for at least assisting in disengaging the engagement between said connecting portions (13, 14, 16a, 16b) and each connector part (11, 10), the device comprising at least two connecting portions (13, 14, 16a, 16b), the disengagement means (12) being connected with the first connector part (10) and comprising engagement means for engagement with corresponding engagement means on the second connector part (11), the second connector part (11) comprising a disk (23) including a through-going hole (26, 27) in connection with each corresponding connecting portion (16a, 16b), the engagement means of said connector part being provided on said disk (23), the engagement means of the disengagement means (12) comprising internal threads (18) and the engagement means of the second connector part comprising external threads (21), and wherein the holes (26, 27) in the disk (23) of the second connector part (11) are arranged with a small spacing, and in which the external threads (21) comprise at least one recess (25).
- 20 2. A coupling device (9) according to claim 1 wherein the external threads (21) of the engagement means of the second connector part (11) comprises two or more recesses (25).
- 25 3. A coupling device (9) according to claim 1 or 2 wherein at least one of the through-going holes (26, 27) is extending into the recess (25).
- 30 4. A coupling device (9) according to any one of the preceding claims in which the engagement means (18, 21) comprises a bayonet coupling including at least one track in the disengagement means (12) and at least one projection on the second connector part (11), said at least one track including at least one portion extending obliquely with respect to the axial direction of the disengagement

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ART 34 AMDT

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means.

5. A coupling device (9) according to any one of the preceding claims, in which at least some of said connecting portions (16a, 16b, 13, 14) have such an axial extension that the first and the second connector parts (11, 10) are brought into connection with each other before activation of the disengagement means (12).

6. A coupling device (9) according to any one of the preceding claims, in which said disengagement means (12) comprises handle means (22).

10 7. A coupling device (9) according to any one of the preceding claims, in which the first connector part (10) comprises two male luer lock connecting portions (13, 14) and the second connector part comprises two female luer lock connecting portions (16a, 16b).

15 8. A probe (3) for an irrigation system, comprising a first connector part (10) or a second connector part (11) of a coupling device (9) according to any one of the claims 1 to 9.

20 9. A method of disengaging the engagement between a first and a second connector part (10, 11) of a coupling device (9) according to any one of the claims 1 to 9, wherein said disengagement means (12) is activated in such a way that the first and the second connector parts are substantially pulled out of each other.

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ART 34 AMDT